IN THE CLAIMS:

1. (Currently Amended) An athermal arrayed-waveguide grating comprising:

an input waveguide for inputting two or more optical signals;

a grating array for separating the input optical signals into different light wavelengths;

a first slab having a first layer and a second layer with different refractive indices from each other, said first layer being disposed for coupling the input waveguide to said second layer, said second layer being disposed for coupling said first layer~~with~~ to the grating array;

a second slab for causing the different light wavelengths separated at the grating array to be imaged on an egress surface thereof; and,

an output-waveguide array for outputting each light wavelength imaged on the egress surface of the second slab in a form of a separated channel.

2. (Original) An athermal arrayed-waveguide grating according to claim 1, wherein the first layer connected to the input waveguide comprises a predetermined refractive index that is different from the input waveguide.

3. (Currently Amended) An athermal arrayed-waveguide grating according to

claim 1, wherein the second layer is interposed between the first layer and the grating array and comprises a refractive index that is equal to that of the input waveguide.

4. (Original) An athermal arrayed-waveguide grating according to claim 2, wherein the first layer is formed by material having a refractive index of 1.415.

5. (Original) An athermal arrayed-waveguide grating according to claim 2, wherein the second layer is formed by material having a refractive index of 1.46.

6. (Original) An athermal arrayed-waveguide grating according to claim 2, wherein the first layer of the first slab has a length of 21.07 μm in a direction in which the optical signal travels.

7. (Currently Amended) An optical-waveguide device for guiding an optical signal comprising:

a substrate;

an input waveguide extending at least partially across the substrate, a grating array for separating the optical signals into different light wavelengths;

a first slab having a first layer and a second layer ~~for coupling~~that are disposed in

series between ~~the grating array with~~ the input waveguide and the grating array so that the layers collectively couple the input waveguide to the grating array; and,

a second slab for coupling the different light wavelengths separated by the grating array to an output waveguide, where the refractive index of the first layer and the second layer is substantially different.

8. (Previously Presented) An optical-waveguide device of claim 7, wherein the refractive index of the second layer is the same as the input waveguide.

9. (Original) An optical-waveguide device of claim 7, wherein the input and output waveguides extend at least partially across the substrate.

10. (Original) An optical-waveguide device of claim 7, wherein the grating array extend at least partially across the substrate.

11. (Original) An optical-waveguide device of claim 7, wherein the first layer is formed by material having a refractive index of 1.415.

12. (Original) An optical-waveguide device of claim 7, wherein the second layer

is formed by material having a refractive index of 1.46.

13. (Original) An optical-waveguide device of claim 7, wherein the first layer of the first slab has a length of 21.07 μm in a direction in which the optical signal travels.

14. (Currently Amended) A method of manufacturing an optical-waveguide device for guiding an optical signal, the method comprising steps of:

forming an input waveguide extending at least partially across the substrate;

forming a first slab having a first layer and a second layer extending at one end of the input waveguide, both layers having respective first and second ends, the first end of the first layer being disposed to join said one end of the input waveguide, the second end of the first layer being disposed to join the first end of the second layer, the first layer having a first refractive index value and the second layer having a second refractive index value;

forming a grating array disposed to join the second end of the second layer~~extending at one end of the first slab~~ and extending at least partially across the substrate; and,

forming a second slab extending at one end of the grating array and extending at least partially across the substrate.

15. (Original) The method of claim 14, further comprising the step of forming an output waveguide extending at one end of the second slab and extending at least partially across the substrate.

16. (Previously Presented) The method of claim 14, wherein the refractive index of the second layer is formed by the same refractive index of the input waveguide.

17. (Original) The method of claim 14, wherein the first layer is formed by material having a refractive index of 1.415.

18. (Original) The method of claim 14, wherein the second layer is formed by material having a refractive index of 1.46.

19. (Original) The method of claim 14, the first layer of the first slab has a length of 21.07 μm in a direction in which the optical signal travels.

20. (New) The device of claim 7, wherein said second layer is disposed for coupling the grating array to said first layer, said first layer being disposed for coupling the input waveguide to said second layer.